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10/575,762

04/13/2006

Aldo Bolle

367061

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23117

7590

09/30/2008

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EXAMINER

CHAU, PETER P

ART UNIT

PAPER NUMBER

4144

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |                                     |  |
|------------------------------|--------------------------------------|-------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/575,762 | <b>Applicant(s)</b><br>BOLLE ET AL. |  |
|                              | <b>Examiner</b><br>PETER CHAU        | <b>Art Unit</b><br>4144             |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 4/13/2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/5/08, 5/10/2006, 4/13/2006</u> .                            | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. Claims 1-9 have been examined and are pending.

#### ***Information Disclosure Statement***

2. An initialed and dated copy of Applicant's IDSs form 1449 submitted on 3/5/2008, 5/10/2006, 4/13/2006, is attached to the Office Action.

#### ***Specification***

3. The abstract of the disclosure is objected to because it discloses a SDH-network being optional and the claims disclose using the SDH network to transport Ethernet frames. Correction is required. See MPEP § 608.01(b).

#### ***Claim Objections***

4. Claim 5 is objected to because of the following informalities: "...PDH-level network." The examiner will interpret PDH-level network to be SDH-level network for claims 5-9. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

5. Claim 2, 3, 7 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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6. Claims 2 and 7 recites the limitation "the first Ethernet LAN" in the second line of each claim. There is insufficient antecedent basis for this limitation in the claim. The examiner will interpret it as "the first local area network" hereinafter.

7. Claim 3 and 8 recites the limitation "the second Ethernet LAN" in the third line of each claim. There is insufficient antecedent basis for this limitation in the claim. The examiner will interpret it as "the second local area network" hereinafter.

8. Claim 3 recites the limitation "the second En-network" in the second line of the claim. There is insufficient antecedent basis for this limitation in the claim. The examiner will assume there is a second EN-network between a second local area network and a SDH-level network for the examination of claim 3.

### ***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. **Claims 1-9** are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 1229692 Flavin et al. (IDS filled on 4/13/2006) and EP 1339198 to Maggio et al. (hereinafter "Maggio") (IDS filled on 5/10/2006) and in further view CN 1120609 Shaohua (IDS filled on 3/5/2008).

**As per claim 1, while Flavin discloses a method of transmitting frames from a first local area network (LAN) to a second local area network (LAN) comprising the steps of (abstract), Flavin does not, but Maggio disclose Ethernet** (page 2 lines 1-10, discloses information about Ethernet such as Ethernet frames do not have a fixed length/size but only a maximum size).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include Ethernet in the method of Flavin to increase scalability (Maggio, page 2 lines 1-10).

**While Flavin discloses mapping frames from the first local area network onto a Plesiochronous Digital Hierarchy (PDH) data stream** (page 3 lines 35-50, discloses mapping from a first network; page 14 lines 35-40, discloses mapping into plesiosynchronous digital hierarchy), **Flavin does not, but Maggio disclose Ethernet frames via Generic Framing Procedure (GFP)** (page 4 lines 30-35, discloses further encapsulation (mapping) of Ethernet via GFP).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Flavin and Maggio to include Ethernet frames via Generic Framing Procedure in the method of Flavin to enhance transport of Ethernet frame traffic over a transport SDH network (Maggio, page 2 lines 24-25).

**While the combination of Flavin and Maggio discloses transmitting said mapped Ethernet frames to a SDH-network** (Flavin discloses transporting the second frames (mapped frames) across the intermediate network (SDH-network), page 3 lines 45-46), **Flavin does not, but Shaohua discloses a En-network** (page 7 lines 1-6, discloses using PDH network to connect between two distant Ethernet switches).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Flavin and Maggio and in further view of Shaohua to include a En-network to connect two distant Ethernet switches together (Shaohua, page 7 lines 1-6).

**The combination of Flavin and Maggio and in further view of Shaohua discloses receiving the transmission at the second local area network through**

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**the SDH-level network** (Flavin discloses the second network receiving the transmission from the SDH-network, page 3 lines 47-50).

**While Flavin discloses demapping frames from the first local area network and transmitting said demapped frames into the second local area network** (page 3 lines 47-50, discloses reassembling (demapping) the received frame from the first network and then outputting the reassembled (demapped) frame onto the second network), **Flavin does not disclose Ethernet frames via Generic Framing Procedure.**

However, Maggio discloses Ethernet frames via Generic Framing Procedure (further level of data encapsulation of Ethernet via GFP, page 4 lines 30-32).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include Ethernet frames via Generic Framing Procedure in the method of Flavin to improve the interfacing between Ethernet and SDH network (Maggio, page 4 line 30).

**As per claim 2, the combination of Flavin and Maggio and Shaohua teaches the method of claim 1. While Flavin teaches mapping is carried out at a junction point between the first local area network and an intermediate network,** (page 3 lines 35-50, discloses a first node (junction point) situated between a first network (first local area) and an intermediate network and at the first node, mapping occurs), **Flavin does not, but Shaohua discloses a En-network,** (page 7 lines 1-6, discloses a PDH network between two Ethernet switches).

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Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Flavin and Maggio and in further view of Shaohua to have a En-network to connect two distant Ethernet switches together (Shaohua, page 7 lines 1-6).

**As per claim 3, the combination of Flavin and Maggio and Shaohua teaches the method of claim 1. While Flavin teaches according to which said demapping is carried out at a junction point between an intermediate network and a second local area network** (page 3 lines 35-50, discloses a second node (junction point) situated between a intermediate network and a second network (second local area network) and at the second node, demapping occurs), **Flavin does not, but Shaohua discloses a En-network**, (page 15 lines 4-7, discloses a PDH network between two Ethernet switches).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Flavin and Maggio and in further view of Shaohua to a En-network to connect two distant Ethernet switches together (Shaohua, page 7 lines 1-6).

**As per claim 4, the combination of Flavin and Maggio and Shaohua teaches the method of claim 1, according to which the transport of GFP frames through the SDH-network is carried out by means of so called virtual containers, VCx-containers** (Flavin discloses a virtual container is the carrying unit in SDH networks and



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a number is in place of the “x” in VCx to indicate the size of the virtual container and virtual containers (VC) has its own frame structure, page 6 lines 11-16; page 13 line 1, discloses virtual container is the entity that is transported in an SDH network).

**As per claim 5, while Flavin discloses a system for transmitting frames from a first local area network to a second local area network, comprising** (abstract), **Flavin does not, but Maggio disclose Ethernet** (page 2 lines 1-10, discloses information about Ethernet such as Ethernet frames do not have a fixed length/size but only a maximum size).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include Ethernet in the system of Flavin to increase scalability (Maggio, page 2 lines 1-10).

**While Flavin discloses means for mapping frames from the first local area network onto Plesiochronous Digital Hierarchy format** (page 3 lines 35-50, discloses mapping from a first network; page 14 lines 35-40, discloses mapping into plesiosynchronous digital hierarchy), **Flavin does not, but Maggio disclose Ethernet frames via Generic Framing Procedure (GFP)** (page 4 lines 30-35, discloses further encapsulation (mapping) of Ethernet via GFP).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Flavin and Maggio to include Ethernet frames via Generic Framing Procedure in the system of Flavin to enhance transport of Ethernet frame traffic over a transport SDH network (Maggio, page 2 lines 24-25).

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**While the combination of Flavin and Maggio discloses means for transmitting said mapped Ethernet frames to an SDH-level network** (Flavin discloses transporting the second frames (mapped frames) across the intermediate network (SDH-network), page 3 lines 45-46), **the combination of Flavin and Maggio does not, but Shaohua discloses a En-network** (page 7 lines 1-6, discloses using PDH network to connect between two distant Ethernet switches).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Flavin and Maggio and in further view of Shaohua to include a En-network to connect two distant Ethernet switches together (Shaohua, page 7 lines 1-6).

**As per claim 6, the combination of Flavin and Maggio and in further view of Shaohua teaches the system of claim 5, additionally comprising means for:**

**The combination of Flavin and Maggio and in further view of Shaohua discloses receiving the transmission at the second local area network through the SDH-level network** (Flavin discloses the second network receiving the transmission from the SDH-network, page 3 lines 47-50).

**While the combination of Flavin and Maggio disclose receiving the transmission at the second local area network through the SDH-level network** (Flavin discloses the second network receiving the transmission from the SDH-network, page 3 lines 47-50), **Flavin does not, but Shaohua discloses a En-network** (page 7

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lines 1-6, discloses using PDH network to connect between two distant Ethernet switches).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Flavin and Maggio and in further view of Shaohua to have a En-network to connect two distant Ethernet switches together (Shaohua, page 7 lines 1-6).

**While Flavin discloses demapping frames from the first local area network and transmitting said demapped frames into the second local area network** (page 3 lines 47-50, discloses reassembling (demapping) the received frame from the first network and then outputting the reassembled (demapped) frame onto the second network), **Flavin does not disclose Ethernet frames via Generic Framing Procedure.**

However, Maggio discloses Ethernet frames via Generic Framing Procedure (further level of data encapsulation of Ethernet via GFP, page 4 lines 30-32).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include Ethernet frames via Generic Framing Procedure in the system of Flavin to improve the interfacing between Ethernet and SDH network (Maggio, page 4 line 30).

**As per claim 7, the combination of Flavin and Maggio and Shaohua teaches the system of claim 5. While Flavin teaches in which the means for said mapping is arranged at a junction point between the first local area network and an**

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**intermediate network**, (page 3 lines 35-50, discloses a first node (junction point) situated between a first network (first local area network) and an intermediate network and at the first node, mapping occurs), **Flavin does not, but Shaohua discloses a En-network**, (page 15 lines 4-7, discloses a PDH network between two Ethernet switches).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Flavin and Maggio and in further view of Shaohua to have a En-network to connect two distant Ethernet switches together (Shaohua, page 7 lines 1-6).

**As per claim 8, the combination of Flavin and Maggio and Shaohua teaches the system of claim 6. While Flavin teaches according to which said means for demapping is arranged at a junction point between an intermediate network and a second local area network** (page 3 lines 36-50, discloses a second node (junction point) situated between a intermediate network and a second network (second local area network) and at the second node, demapping occurs), **Flavin does not, but Shaohua discloses a En-network**, (page 7 lines 1-6, discloses a PDH network between two Ethernet switches).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Flavin and Maggio and in further view of Shaohua to a second En-network to connect two distant Ethernet switches together (Shaohua, page 7 lines 1-6).

**As per claim 9, the combination of Flavin and Maggio and Shaohua teaches the system of claim 5, in which the transport of GFP frames through the SDH-network is carried out by means of so called virtual containers, VCx-containers** (Flavin discloses a virtual container is the carrying unit in SDH networks and a number is in place of the "x" in VCx to indicate the size of the virtual container and virtual containers (VC) has its own frame structure, page 6 lines 11-16; page 13 line 1, discloses virtual container is the entity that is transported in an SDH network),

### ***Conclusion***

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 6,993,046 Hernandez-Valencia et al. teaches mapping data into an SDL protocol packet for transmission over a SONET network.

U.S. PGPub 2004/0190548 Harel et al. teaches efficient transport of encapsulated data over a packet-switched network.

U.S. PGPub 2003/0012218 Russell et al. teaches a method of transporting frames over SDH network using different types of mappings.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PETER CHAU whose telephone number is (571)270-7152. The examiner can normally be reached on Monday-Friday 7:30-5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Taghi Arani can be reached on 571-242-3787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/P. C./

Examiner, Art Unit 4144

/Taghi T. Arani/

Supervisory Patent Examiner, Art Unit 4144